



Memorandum

U.S. Department
of Transportation

**Federal Aviation
Administration**

Subject: **ACTION:** Review and Concurrence, Equivalent Level of
Safety Finding for Cessna's Project SP2095WI-T on
Model 560XL

Date: August 23, 2002
Reg. Ref: 25.815

From: Manager, TSS Airframe/Cabin Safety Branch, ANM-115

Reply to T.N.Baktha
Attn. of: ACE-118Wa

To: Tina L. Miller, FAA Program Manager, ACE-117W

ELOS SP2095WI-T AG-8
Memo

Background:

Cessna Aircraft Company is requesting an Equivalent Level of Safety finding for 14 CFR 25.815, Width of Aisle, for the Model 560XL airplane. An Equivalent Level of Safety was granted by Issue Paper AG-7 dated December 12th, 1997 under FAA Project Number SP2095WI-T. This Equivalent Level of Safety allowed a minimum aisle width of 15 inches instead of 20 inches when measured above 25 inches from the floor for passenger configurations up to and including 12 passengers. Cessna is now requesting an equivalent level of safety to have an aisle width of 13 inches from 25 inches to 27.5 inches measured from the dropped aisle floor and 15 inches above 27.5 inches measured from the dropped aisle floor.

Applicable Regulations:

§§ 25.21, 25.815

Regulation Requiring an ELOS:

§ 25.815

Description of compensating design features:

- 1) The size of the Model 560XL cabin is small compared to other Part 25 aircraft.
 - a) The width of the cabin is only 5.5 feet wide, which only allows one seat to be installed on each side of the aisle. 14 CFR 25.817 allows three seats to be installed on each side of the aisle. The fewer seats abreast in a row, the less time it will take to evacuate the aircraft.
 - b) The length of the cabin is only 17.5 feet long, which only allows three rows of seats to be installed for the standard and optional configurations of the Model 560XL. The distance between the LH forward exit and the RH aft exit is only 11 feet. 25.807(f)(4) allows 60 feet between exits on the same side of the fuselage. By only having to pass through three rows of seats and having the passengers so close to the exits, the less time it will take to evacuate the aircraft.

2) The number of passengers per exit is small compared to other Part 25 aircraft.

The standard configuration of the Model 560XL has 9 passengers (12 maximum). So there are 5 passengers (6 maximum) per Type III exit. 25.807(g) allows 35 passengers per each Type III exit. The small number of passengers per exit in the Model 560XL will decrease the evacuation time required to exit the aircraft.

The only change from the ELOS previously granted by FAA, the aisle width will be 13 inches instead of 15 inches from 25 inches to 27.5 inches when measured from the dropped aisle floor. Considering the compensating reasons offered by Cessna, FAA extends the equivalent level of safety finding for 14 CFR 14 25.815 for 560XL.

Explanation of how design features provide an ELOS:

The compensating design features described above, provide an equivalent level of safety and meet the intent of the regulation.

/s/

Alan W. Sinclair for Frank Tiangsing
Aug. 23, 2002

Transport Standards Staff -ANM-110

Date

ELOS Originated by Wichita ACO:	Name T.N. Baktha	Routing Symbol ACE-118Wa
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